(b) All such cables shall be adequate for the intended current and voltage. Splices made in such cables shall provide continuity of all components.

[38 FR 4976, Feb. 23, 1973]

§ 75.805 Couplers.

[STATUTORY PROVISIONS]

Couplers that are used with medium-voltage or high-voltage power circuits shall be of the three-phase type with a full metallic shell, except that the Secretary may permit, under such guidelines as he may prescribe, no less effective couplers constructed of materials other than metal. Couplers shall be adequate for the voltage and current expected. All exposed metal on the metallic couplers shall be grounded to the ground conductor in the cable. The coupler shall be constructed so that the ground check continuity conductor shall be broken first and the ground conductors shall be broken last when the coupler is being uncoupled.

§ 75.806 Connection of single-phase loads.

[STATUTORY PROVISIONS]

Single-phase loads, such as transformer primaries, shall be connected phase-to-phase.

§ 75.807 Installation of high-voltage transmission cables.

[STATUTORY PROVISIONS]

All underground high-voltage transmission cables shall be installed only in regularly inspected air courses and haulageways, and shall be covered, buried, or placed so as to afford protection against damage, guarded where men regularly work or pass under them unless they are 6½ feet or more above the floor or rail, securely anchored, properly insulated, and guarded at ends, and covered, insulated, or placed to prevent contact with trolley wires and other low-voltage circuits.

§ 75.808 Disconnecting devices.

[STATUTORY PROVISIONS]

Disconnecting devices shall be installed at the beginning of branch lines in high-voltage circuits and equipped or designed in such a manner that it can be determined by visual observation that the circuit is deenergized when the switches are open.

§ 75.809 Identification of circuit breakers and disconnecting switches.

[STATUTORY PROVISIONS]

Circuit breakers and disconnecting switches underground shall be marked for identification.

§ 75.810 High-voltage trailing cables; splices.

[STATUTORY PROVISIONS]

In the case of high-voltage cables used as trailing cables, temporary splices shall not be used and all permanent splices shall be made in accordance with § 75.604. Terminations and splices in all other high-voltage cables shall be made in accordance with the manufacturer's specifications.

§ 75.811 High-voltage underground equipment; grounding.

[STATUTORY PROVISIONS]

Frames, supporting structures and enclosures of stationary, portable, or mobile underground high-voltage equipment and all high-voltage equipment supplying power to such equipment receiving power from resistance grounded systems shall be effectively grounded to the high-voltage ground.

§ 75.812 Movement of high-voltage power centers and portable transformers; permit.

[STATUTORY PROVISIONS]

Power centers and portable transformers shall be deenergized before they are moved from one location to another, except that, when equipment powered by sources other than such centers or transformers is not available, the Secretary may permit such centers and transformers to be moved while energized, if he determines that another equivalent or greater hazard may otherwise be created, and if they are moved under the supervision of a qualified person, and if such centers and transformers are examined prior to such movement by such person and

found to be grounded by methods approved by an authorized representative of the Secretary and otherwise protected from hazards to the miner. A record shall be kept of such examinations. High-voltage cables, other than trailing cables, shall not be moved or handled at any time while energized, except that, when such centers and transformers are moved while energized as permitted under this section, energized high-voltage cables attached to such centers and transformers may be moved only by a qualified person and the operator of such mine shall require that such person wear approved and tested insulated wireman's gloves.

[35 FR 17890, Nov. 20, 1970, as amended at 60 FR 33723, June 29, 1995]

§ 75.812–1 Qualified person.

A person who meets the requirements of § 75.153 is a qualified person within the meaning of § 75.812.

§ 75.812–2 High-voltage power centers and transformers; record of examination.

The operator shall maintain a record of all examinations conducted in accordance with § 75.812. Such record shall be kept in a book approved by the Secretary.

HIGH-VOLTAGE LONGWALLS

SOURCE: 67 FR 11001, Mar. 11, 2002, unless otherwise noted.

§ 75.813 High-voltage longwalls; scope.

Sections 75.814 through 75.822 of this part are electrical safety standards that apply to high-voltage longwall circuits and equipment. All other existing standards in 30 CFR must also apply to these longwall circuits and equipment where appropriate.

§ 75.814 Electrical protection.

(a) High-voltage circuits must be protected against short circuits, overloads, ground faults, and undervoltages by circuit-interrupting devices of adequate interrupting capacity as follows:

(1) Current settings of short-circuit protective devices must not exceed the setting specified in approval documentation, or seventy-five percent of the minimum available phase-to-phase short-circuit current, whichever is less.

(2) Time-delay settings of short-circuit protective devices used to protect any cable extending from the section power center to a motor-starter enclosure must not exceed the settings specified in approval documentation, or 0.25-second, whichever is less. Time delay settings of short-circuit protective devices used to protect motor and shearer circuits must not exceed the settings specified in approval documentation, or 3 cycles, whichever is less.

(3) Ground-fault currents must be limited by a neutral grounding resistor to not more than—

(i) 6.5 amperes when the nominal voltage of the power circuit is 2,400 volts or less; or

(ii) 3.75 amperes when the nominal voltage of the power circuit exceeds 2,400 volts.

(4) High-voltage circuits extending from the section power center must be provided with—

(i) Ground-fault protection set to cause deenergization at not more than 40 percent of the current rating of the neutral grounding resistor;

(ii) A backup ground-fault detection device to cause deenergization when a ground fault occurs with the neutral grounding resistor open; and

(iii) Thermal protection for the grounding resistor that will deenergize the longwall power center if the resistor is subjected to a sustained ground fault. The thermal protection must operate at either 50 percent of the maximum temperature rise of the grounding resistor, or 150 °C (302 °F), whichever is less, and must open the ground-wire monitor circuit for the high-voltage circuit supplying the section power center. The thermal protection must not be dependent upon control power and may consist of a current transformer and overcurrent relay.

(5) High-voltage motor and shearer circuits must be provided with instantaneous ground-fault protection set at not more than 0.125-ampere.

(6) Time-delay settings of ground-fault protective devices used to provide coordination with the instantaneous ground-fault protection of motor and